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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,368	11/18/2003	Nestor O. Farmiga	90997.000003	6666

23387 7590 11/23/2005

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EXAMINER

DETSCHER, MARISSA

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/716,368		FARMIGA ET AL.	
	Examiner		Art Unit	
	Marissa J. Detschel		2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 10-18 and 31-43 is/are allowed.
- 6) ☒ Claim(s) 9, 19, 20, and 26 is/are rejected.
- 7) ☒ Claim(s) 21-25 and 27-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed on July 29, 2004 has been fully considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim states the limitation of “the first and second variable angles are true length in the axial plane.” How can an angle have a length? Applicant’s disclosure fails to define this “true length.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drabarek et al. (USPN 6,462,815).

In regards to claim 19, Drabarek discloses a device for optically testing surfaces that comprises:

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a probe body (22) having separate optical pathways for propagating first and second measuring beams (column 2, lines 58-60);

focusing optics (14, 19) that separately focus the first and second measuring beams beyond the probe body for measuring different compound surfaces (at 17 and 18) of the test object (column 3, lines 30-36); and

an adjustable beam deflector (20, 16, and 12) that inclines the second measuring beam through a range of angles for measuring more than one of the compound surfaces (at 18) with the second measuring beam (See Figure 1 below).

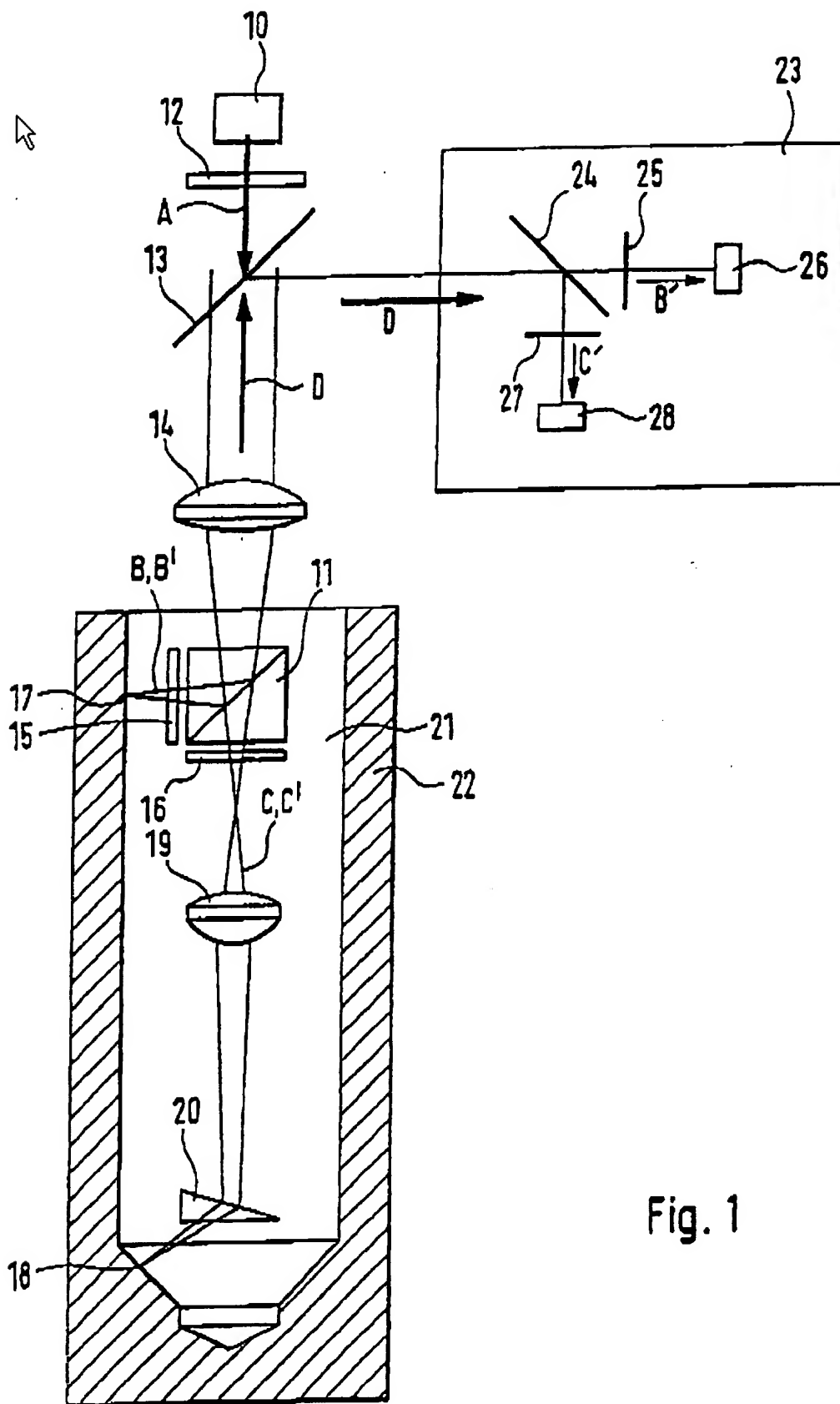


Fig. 1

The adjustable beam deflector of Drabarek's device is in the form of a polarization rotator (12), a polarizer (16), and a beam deflector (20). By changing the polarization plane with the polarization rotator, it is possible to inspect the two surfaces simultaneously (column 2, lines 7-9). The beam deflector deflects the second beam in different directions (column 2, lines 37-40). Drabarek teaches adjusting the angle the beam deflects from the deflector to take measurements at different surfaces of the test object (column 3, lines 37-52). It is known in the art to use a polarization rotator to achieve this. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the polarizing rotator with a beam deflector to create an adjustable beam deflector.

As to claim 20, Drabarek teaches adjusting the second measuring beam off the deflector body to incline the beam through different angles with respect to the first measuring beam (column 3, lines 37-40).

Regarding claim 26, Drabarek teaches propagating the first and second measuring beams through the probe body with respect to the reference axis (i.e. the axis that runs straight down the probe), and comprises a fixed deflector (the beamsplitter face) that inclines the first measurement beam (17) with respect to the reference axis, as can be seen in the figure above.

Allowable Subject Matter

Claims 1-8, 10-18, and 31-43 are allowed.

Claims 21-25 and 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a multi-beam probe that utilizes two measuring beams, the second associated with a beam adjuster, that directs the beams from the probe body to various compound surfaces of a test object.

As to claim 31, the prior art of record, taken alone or in combination, fails to disclose or render obvious a system for interferometrically measuring compound rotational surfaces of a test object with an adjustment mechanism within a probe that varies the inclination of the second measuring beam for measuring a compound rotational surface.

Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is Dunn et al. (USPN 6,781,699). Dunn discloses a scanning interferometer that uses a probe to measure various compound surfaces with two beams, the second beam's angle of inclination being varied by moving the actual probe in the X and Z-directions (i.e. adjustment mechanism outside probe).

Conclusion

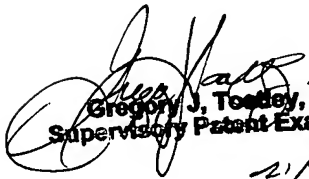
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa Detschel
11-18-05
MJD


Gregory J. Tooley, Jr.
Supervisory Patent Examiner
2/1/05